



LOGGERHEADLINES

Sea Turtle News from South Carolina

August - December, 2004

Greetings!

As we bid farewell to our turtles, there is some late season news, as you will read in this "better late than never" issue of *Loggerheadlines*.

Strandings

Strandings during August were much lower than last year, while September through December were similar to previous years. There were 25 loggerheads, three greens, three Kemp's ridleys and one leatherback. This brought the total for the year to 150, which is slightly below last year, but higher than the previous four years.

Necropsy Summary

Post-mortems were performed on six sea turtles from August through December (three loggerheads, two Kemp's ridleys and one green). Four died acutely and boats apparently struck two of these. Two died after long-term illnesses. One ridley was nearly adult size, measuring 25 inches CCL by 27 inches CCL. It is rare for a Kemp's of this size to strand in South Carolina.

Rehabilitation at the SC Aquarium

Three turtles were transported to the SC Aquarium for rehabilitation from August - December. One debilitated loggerhead with atypical coloring and shape nicknamed "Litchfield," stranded in August on Litchfield Beach. The other two - very debilitated loggerheads - were salvaged in October and both died within a week of admittance.

Four recovered loggerheads have been released since August. All four were

debilitated turtles, one of which was a mature female, found stranded on Blackbeard Island, Georgia. One was released in September off Seabrook, two in October at the Isle of Palms and one off Kiawah in November, just before the water temperatures got too low.

Three turtles are over-wintering at the aquarium. They are "Hamlin," a loggerhead which stranded in late May after being entangled in a crab pot, "Channel," another loggerhead recovered last June from the Charleston Harbor entrance channel (who is undergoing carapace repair after being struck by a boat) and "Litchfield."

The Ripley's Aquarium in Myrtle Beach stepped up help this summer when the SC Aquarium found all six of its available "beds" full. "Litchfield" was held at Ripley's for several weeks before space opened up at the SC Aquarium. We appreciate their assistance.

The SC Aquarium has been awarded a grant for \$150,000 from the National Fish and Wildlife Foundation for capital expenditures and exhibits. Besides improving life support systems and increasing holding capacity, the grant will fund medical diagnostic equipment and a new conservation exhibit on sea turtles.

For the calendar year 2004, the SC Aquarium admitted seven stranded turtles. Five were released (three of which had over-wintered), two died, and three remain in long-term care.

Nesting Update

A few more nests were laid in August bringing the total for the nest protection project beaches

to 774. This is still well below the nesting effort for 2003.

We were only able to complete three out of four aerial beach surveys this summer, so our sample size is not very large. The estimated statewide nesting effort was 1,147. If the nest protection projects represent about 70% of the nesting effort, then using that calculation, the statewide nesting effort would be 1,106, a difference of 41 nests. As they say, "Close enough for government work."

Thru 10/31	2003	2004	% of 2003
Myrtle Beach S. P.	5	2	40%
Huntington Beach S. P.	19	10	53%
S.C.U.T.E.	100	28	28%
South Island	101	16	16%
Cape Island	836	249	30%
Lighthouse Island	314	95	30%
Deweese Island	14	3	21%
Sullivans/Isle of Palms	35	10	29%
Folly Beach	50	22	44%
Kiawah Island	225	64	28%
Seabrook Island	34	4	12%
Botany Bay Isl & Plan	269	76	28%
Edingsville Beach	62	16	26%
Edisto Beach S. P.	87	20	23%
Edisto Beach	63	11	17%
Harbor Island	47	22	47%
Hunting Island	67	19	28%
Fripp Island	54	9	17%
Pritchards Island	124	29	23%
Hilton Head Island	173	69	40%
TOTAL	2,679	774	29%

Note: 2003 does not include 2 Dc nests.

Nesting News

Garden City

The phone call came in on August 28th and we immediately felt sure it was a green sea turtle due to the timing of the call and the location.

When we got there, the body pit (8 feet long by 6 feet wide) was just like all the books say – like a bomb went off! Sand was thrown an additional 10 feet. Lee Wilson and I probed and he found the eggs pretty quickly. The

turtle had laid the eggs in a sand dune that also consisted of rocks and beach vitex.

In early October, we candled five eggs and all looked infertile. We inventoried the nest in early December and found 110 unhatched eggs. This is the fourth green turtle nest to be laid in Garden City and based on the years they were deposited, (1996, 1998, 2002 and 2004) it is possible that this is the same female. – **Ann Wilson**

Regional News

North Carolina

Matthew Godfrey, State Coordinator for the North Carolina Wildlife Commission, reports the 2004 nesting season was much lower than normal: only 304 nests (mostly loggerheads) were reported by the different beach monitoring projects. This is nearly 50% of the average number of nests laid per year, based on the previous 10 years. Interestingly, there were up to nine potential leatherback nests reported in Cape Hatteras and Cape Lookout National Seashores, although the majority were lost during heavy erosion associated with the many tropical storms and hurricanes in 2004. There were 438 strandings reported in North Carolina in 2004: the majority were juvenile loggerheads, with some green turtle, Kemp's ridley and leatherback strandings also occurring.

The big surprise in 2004 (and so far in 2005) is Fisher, the juvenile loggerhead that was raised in captivity for its first nine years, and then released with a satellite tag just off the North Carolina coast in July 2004. Fisher has been swimming east-southeast across the Atlantic since then, and has just entered the waters of the Cape Verde Islands off Africa. Fisher's track can be seen here:

http://www.seaturtle.org/tracking/?tag_id=49818

Georgia

Mark Dodd with Georgia DNR reports that in 2004, 239 stranded sea turtles were observed, slightly higher than the 15-year average of 218.

A large-scale stranding event in May accounted for approximately 30% of the total. The high sea turtle mortality during May was attributed to commercial fishing activity, particularly illegal or improperly installed TEDs in shrimp trawls. Interesting stranding patterns included an increase in the number of carcasses found with propeller wounds (<20%) and the first incidence of a green turtle with fibropapilloma tumors in Georgia.

Work continues to raise money for a sea turtle rehabilitation facility on Jekyll Island. The Georgia Sea Turtle Center is to be located in the historic 1908 power plant building near the Jekyll Club Hotel. Fund raising is going well, and we are currently approximately \$450,000 short of the 2.1 million dollars needed to complete the project. The proposed facility will include a large educational area, tanks for up to 20 turtles and room to expand.

Florida

Allen Foley, State Stranding Coordinator, reports that by recent standards, we had a relatively quiet year for strandings. Our tentative total for 2004 is 1180 dead, injured or otherwise debilitated sea turtles. This is very close to the previous 10 year average (1164). Of course, the latter is a shifting baseline and is relatively high itself because of the large number of strandings during the last four years (2000-2003). We had a record high last year of 1840. This year (2004) had the lowest stranding total since 1999 but it was still higher than any other year prior to 2000 except for 1989. There were no unusual mortality factors that we detected. In general, we had an above average number of strandings during the first half of 2004 and then a below average number of strandings during the second half of 2004, thus we came out close to even at the end of the year.

Research

Satellite Tracking - Update

Five nesting loggerheads were instrumented with satellite transmitters in July 2003.

Cowgill's Charm, Marlow's Maiden and Lofton's Lass migrated north of Cape Hatteras for the summer/fall, returned to warmer waters off the North Carolina coast for the winter, and have now migrated back to either their original or a new summer/fall foraging area.

Baldwin's Belle was different in that she migrated to an area approximately 100 km east of the nesting beach and has remained there. She stopped transmitting spring 2004. During summer 2004, a year after turtles' were tagged, we were still receiving data from two loggerheads, Marlow's Maiden and Lofton's Lass. Marlow's Maiden remained in her summer/fall resident foraging area until late October 2004. We last heard from her on November 17, 2004 and she was approximately 40 km southeast of Cape Lookout, NC. Similarly, Lofton's Lass remained in her summer/fall resident foraging area until early October 2004. By late October she was just south of Cape Hatteras, NC. Her last signal on December 17, 2004 indicated she was approximately 120 km NE of Cape Island where she originally nested. We do not expect to hear from these turtles again. You can view these turtles' migrations at www.dnr.state.sc.us/seaturtle/.

Notes from the Field

Kiawah Island

On November 12th, to the delight of about 250 residents, the adult female loggerhead from Georgia was released back into the ocean after rehabilitation at the SC Aquarium. What a beautiful animal she was. This was the first time we had seen a bathed and scrubbed adult turtle; no sand, no barnacles, bright and shiny. All the folks present were immensely impressed as she "flipped off: -- **Art Zackrison**

Isle of Palms

On August 5th, members of the Isle of Palms Turtle Team were present when a metal sculpture was unveiled as a final touch on the city's Front Beach Enhancement Project. This is the city's first piece of public art. It was

created by John Douglas Donahue, Jr. and depicts a loggerhead turtle surrounded by a shrimp, a crab and a school of fish. The city hopes that it will "trigger environmental curiosity among the island's residents and visitors so that they may become increasingly knowledgeable about protecting the fragile ecosystem that makes this area such a nice place to live and visit." The Isle of Palms also installed turtle friendly down-lights on Ocean Boulevard as part of the Front Beach Enhancement Project.



On September 9th, the volunteer party brought in over \$1,000 dollars from the silent auction and tee shirt sales. We are sending \$700 to the SC Aquarium Turtle Rehab Program. We also raised \$1,000 for the tsunami relief fund on www.seaturtle.org. -- **Mary Pringle**

Journey of the Loggerhead available now

The Association for Library Service to Children (ALSC), a division of the American Library Association (ALA), has selected its 2005 list of Notable Children's Videos. The list includes videos for children 14 years of age and younger of especially commendable quality that demonstrate respect for a child's intelligence and imagination and that reflect and encourage the interests of children in exemplary ways. "Journey of the Loggerhead" was included on this prestigious list. Environmental Media is offering special discounts to marine turtle organizations and conservation groups. For more information or to order: Contact **Katy Garland** at

kgarland@envmedia.com or 800-368-3382, ext. 12 or log onto www.envmedia.com
-- **Katy Garland**

Beach Vitex Update

We have a 'new and improved' system for you to check the updates for Task Force activities. Please go to:
<http://www.northinlet.sc.edu/stewardship/vitex.htm>
for the October update and recent photos. If you do a search on the Internet for beach vitex you will find lots of links to all the articles that have appeared in publications recently. A year ago all the links advocated BV being a good dune plant that helped control erosion. We are making progress!

Important Beach Vitex Dates

Feb. 18-20: Southeastern Wildlife Expo Charleston, SC

Fish and Wildlife Service will have a display on beach vitex under the tent at Marion Square. Come see us!

Feb. 25: NC Beach Vitex Symposium Wilmington, NC

This meeting was originally scheduled for Jan. 20 and was postponed because of snow.

Feb. 26 to Mar.3: National Invasive Weed Awareness Week Washington, D.C.

A display on beach vitex will be at the US Botanic Gardens Conservatory during this weeklong conference. Randy Westbrooks, USGS, and Betsy Brabson, SC Beach Vitex Task Force, will be attending the conference.

Mar. 10: Beach Vitex Symposium at Hobcaw Barony's Kimbel Lodge Georgetown, SC

A gathering of Task Force members to look at our accomplishments and goals for the coming BV growing season. -- **Betsy Brabson**

25th Annual Symposium on Sea Turtle Biology and Conservation

South Carolina was well represented at the annual meeting in Savannah. **David Owens** was Program Chairman for the entire

symposium and **Whitfield Gibbons** was the keynote speaker for a freshwater turtle workshop, held the first day. **Jennifer Keller** co-chaired the session on Pathology, Health, and Rehabilitation and **Sally Murphy** along with **Allen Foley** from Florida Fish and Wildlife Commission co-chaired the Nesting Beaches session.

There were six oral presentations and ten posters by turtlers from South Carolina. The various institutions represented include: South Carolina Department of Natural Resources, College of Charleston, University of South Carolina, NOAA/National Ocean Service, National Institute of Standards and Technology, Medical University of South Carolina and the South Carolina Aquarium. Here are their contributions. Bold denotes the presenter for oral presentations.

Oral Presentations

Relative abundance of loggerhead turtles in the nearshore waters of the Southeast United States: **Philip P. Maier**, J. David Whitaker, Albert L. Segars, Michael D. Arendt, Richard Vendetti and Sally R. Murphy

The lucrative trade continues: A ten-year overview of illegal import of sea turtle products into the U.S.: **Susan M. Rice** and M. Katherine Moore

Seasonal habitat utilization patterns of juvenile loggerhead sea turtles collected near the Charleston harbor entrance channel, Charleston, SC, USA: **Michael D. Arendt**, Philip P. Maier, Albert L. Segars, Julia I. Byrd and J. David Whitaker

Perfluorinated contaminants measured in sea turtle blood correlate to modulations in plasma chemistry values and immune function measurements: **Margie M. Peden-Adams**, Kurunthachalam Kannan, A. Michelle Lee, Jacke G. EuDaly, Sachi Taniyasu, Nobuyoshi Yamashita, John R. Kucklick, Michael D. Arendt, Philip P. Maier, Albert L. Segars, J. David Whitaker and Jennifer M. Keller

Diagnostic value of blood culture and sensitivities in the medical management of sea turtles: **Tom Sheridan** and Heather Wilson
Geographical comparison of persistent organochlorine pollutant levels in loggerhead eggs (*Caretta caretta*) collected along the southeast coast of USA. **Juan José Alava**, Jennifer M. Keller, Jeanette Wyneken, Larry Crowder, Geoffrey Scott and John R. Kucklick

Posters

Correction of an error in the testosterone radioimmunoassay for evaluating sex ratios and reproductive status of sea turtles: A. Michelle Lee and David W. Owens

The effect of beach nourishment on nesting loggerheads in South Carolina: Julia Byrd

Mercury fluctuation in diamondback terrapins, *Malaclemys terrapin*, collected in Charleston, South Carolina. Gaelle Blanvillain, Jeffrey A. Schwenter, Russell D. Day, Steven J. Christopher, William A. Roumillat and David W. Owens

Do turtles form leks? A comparison of mating systems in sea turtles and terrapins. Rebecca L. Estep and David W. Owens

Hematology and plasma chemistry reference values from free-ranging loggerhead sea turtles along the southeastern U.S. coast: Al Segars, Phil Maier, Mike Arendt, David Whitaker and Bruce Stender

Administration of intracoelomic fluids as an ancillary treatment of floater syndrome in loggerhead sea turtles: Tom Sheridan, Heather Wilson, David Owens and Al Segars

Emerging contaminants in loggerhead and Kemp's ridley sea turtles from the southeastern coast of the U.S.: Jennifer M. Keller, Kurunthachalam Kannan, Sachi Taniyasu, Nobuyoshi Yamashita, Rusty D. Day, Mike D. Arendt, Philip P. Maier, Al L. Segars, J. David Whitaker, Katrina Aleksa, and John R. Kucklick

The South Carolina Aquarium rehabilitation program: Kelly Thorvalson, Bruce Hecker, Jason Crichton, Tom Sheridan and Rachel Metz

Mercury and health in loggerhead sea turtles (*Caretta caretta*): Russell D. Day, Jennifer M. Keller, Terry M. Norton, Mark Dodd, Al Segars, Craig Harms, David Whitaker, Mike Arendt, Matthew Godfrey, Wendy Cluse, Steven J. Christopher and Margie Peden-Adams

Sea turtle conservation in South Carolina: Three decades: Sally R. Hopkins-Murphy, Thomas M. Murphy, Charlotte P. Hope, John W. Coker and DuBose B. Griffin

**South Carolina
Marine Turtle Conservation
Program Web Site**

The South Carolina Marine Turtle Conservation Program web site provides extensive information about the program, news and events and research. It also provides resources to our South Carolina Sea Turtle volunteers.

Important Dates and Notes to Remember

**Feb. 18-20: Southeastern Wildlife Expo
Charleston, SC**

SCDNR will have a display on their sea turtle and manatee programs under the tent at Marion Square. Come visit!

**April 15: SCDNR Sea Turtle Training Workshop
Charleston, SC**

Registration from 9 – 9:30 am. Get a ready for an exciting nesting season!

Please note our new email address for the sea turtle desk: coastbio@dnr.sc.gov

**Please note our new web site address:
<http://www.dnr.state.sc.us/seaturtle/>**

Sally Murphy, *State Coordinator*
Charlotte Hope, *Biologist*
DuBose Griffin, *GIS Analyst, Sea Turtle Desk*
Joan Seithel, *Technical Assistant*

If you have questions or comments, please contact:
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Cover Photo of loggerhead just after release
by **Barbara Bergwerf**.